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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/998,801 | 11/15/2001 | Kristian E. Johnsgard | 14912.832 | 5951 |

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EXAMINER

FASTOVSKY, LEONID M

ART UNIT PAPER NUMBER

3742

DATE MAILED: 01/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

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| | | | |
|------------------------------|--|---|--|
| Office Action Summary | Application No. 09/998,801 | Applicant(s) JOHNSGARD ET AL. | |
| | Examiner Leonid M. Fastovsky | Art Unit 3742 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 October 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 15-27 and 36-52 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 15-27 and 36-52 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 November 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>20051021</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 15, 36, 44 and 48 are rejected under 35 U.S.C. 102(b) as being anticipated by Parkhe (5,909,355).

Parkhe teaches a resistive heater comprising a doped ceramic heating element 212 and inherently undoped ceramic material 206 encased at least a portion of the doped ceramic heating element, wherein the coefficient of thermal expansion of the doped ceramic heating element 212 is substantially the same as the coefficient of thermal expansion of the undoped ceramic material 206 (col. 3, lines 25-63).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 18 and 23-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Parkhe in view of Hierholtzer et al (4,328,5290).

Prkhe discloses substantially the claimed invention, but does not disclose that the heating element comprises silicon nitride, and one of boron or arsenic. Hierholzer discloses a doped ceramic heater comprising silicon carbide 1, boron and arsenic (col. 3, lines 30-42, col. 5, lines 36-49). It would have been obvious to one having ordinary skill in the art to modify Parkhe's invention to include silicon carbide, boron and arsenic as taught by Hierholzer in order to vary resistivity of the heater.

5. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Parkhe in view of Hierholzer and further in view of Frieze (6,582,669).

Parkhe in view of Heirholzer discloses substantially the claimed invention, but does not disclose concentration of nitrogen Frieze discloses a method of producing a ceramic heater with a concentration of nitrogen in the range 1300-2800 ppm (col. 6, lines 40-46). It would have been obvious to one having ordinary skill in the art to modify the invention of Parkhe in view of Hierholzer to include concentration of nitrogen as taught by Frise in order to avoid a potential swelling of the heater (col. 6, lines 35-42).

6. Claims 19-22, 27, 36-43, 45-52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Parkhe in view of Hierholzer and further in view of Mugaresh (5,994,662).

Parkhe in view of Heirholzer discloses substantially the claimed invention, but does not disclose susceptor with pins, holes and a second doped ceramic heating element. Mugaresh discloses a a wafer (Fig. 1-18) comprising a substrate-susceptor support assembly 230 (Fig. 11) and lift pin holes 240 for support of the susceptor 230.

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It would have been obvious to one having ordinary skill in the art to modify the invention of Parkhe in view of Hierholzer to include a susceptor with pins and holes as taught by Muguresh in order to process the wafer, and also add a second doped ceramic heating element as a choice the would have been determined by the user having a desired result in mind.

7. Claims 25-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Parthke in view of Hierholzer and further in view of Kahn et al (5,502,345).

Parkhe in view of Heirholzer discloses substantially the claimed invention, but does not disclose the thickness of the heater and resistivity range. Kahn discloses a ceramic actuator-heater with resistivity having two regions: one of a lower resistivity and one of the higher resistivity and thickness of each region (col. 3, lines 45-68). It would have been obvious to one having ordinary skill in the art to modify the invention of Parkhe in view of Hierholzer to include a resistivity and thickness as taught by Muguresh in order to process the wafer as a choice the would have been determined by the user having a desired result in mind.


Response to Arguments

8. Applicant's arguments with respect to claims 15-27 and 36-52 have been considered but are moot in view of the new ground(s) of rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leonid M. Fastovsky whose telephone number is 571-272-4778. The examiner can normally be reached on M-Th. 8.00 am -6.00 pm.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robin Evans can be reached on 571-272-4777. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Leonid M Fastovsky
Examiner
Art Unit 3742

1/5/06

lmf


ROBIN EVANS
SUPERVISORY PATENT EXAMINER
1/9/06